ENGINE_FAMILY	MANUFACTURER	CERTIFICATE_NUMBER	ISSUE_DATE
GDDXL14.0VLD	DETROIT DIESEL (DDX)	GDDXL14.0VLD-002	30-OCT-2015
GDDXL14.0WLD	DETROIT DIESEL (DDX)	GDDXL14.0WLD-001	30-OCT-2015
GDICL01.8LEA	DOOSAN (DIC)	GDICL01.8LEA-007	07-DEC-2015
GDICL02.4LEA	DOOSAN (DIC)	GDICL02.4LEA-003	07-DEC-2015
GDICL02.4LEB	DOOSAN (DIC)	GDICL02.4LEB-004	07-DEC-2015
GDICL03.4LEA	DOOSAN (DIC)	GDICL03.4LEA-005	07-DEC-2015
GDICL03.4LEB	DOOSAN (DIC)	GDICL03.4LEB-002	07-DEC-2015
GDICL05.8LEA	DOOSAN (DIC)	GDICL05.8LEA-001	07-DEC-2015
GDICL07.6LEA	DOOSAN (DIC)	GDICL07.6LEA-006	07-DEC-2015
GJDXL02.9121	DEERE (JDX)	GJDXL02.9121-002	24-JUL-2015
GJDXL02.9142	DEERE (JDX)	GJDXL02.9142-011	24-JUL-2015
GJDXL02.9303	DEERE (JDX)	GJDXL02.9303-012	30-SEP-2015
GJDXL04.5119	DEERE (JDX)	GJDXL04.5119-003	24-JUL-2015
GJDXL04.5141	DEERE (JDX)	GJDXL04.5141-005	24-JUL-2015
GJDXL04.5211	DEERE (JDX)	GJDXL04.5211-027	30-DEC-2015
GJDXL04.5212	DEERE (JDX)	GJDXL04.5212-018	16-NOV-2015
GJDXL04.5214	DEERE (JDX)	GJDXL04.5214-006	24-JUL-2015
GJDXL04.5304	DEERE (JDX)	GJDXL04.5304-013	30-SEP-2015
GJDXL04.5305	DEERE (JDX)	GJDXL04.5305-024	30-NOV-2015
GJDXL04.5311	DEERE (JDX)	GJDXL04.5311-028	25-MAR-2016
GJDXL04.5315	DEERE (JDX)	GJDXL04.5315-026	17-DEC-2015
GJDXL06.8120	DEERE (JDX)	GJDXL06.8120-004	24-JUL-2015
GJDXL06.8204	DEERE (JDX)	GJDXL06.8204-015	30-SEP-2015
GJDXL06.8210	DEERE (JDX)	GJDXL06.8210-014	30-SEP-2015
GJDXL06.8302	DEERE (JDX)	GJDXL06.8302-019	16-NOV-2015
GJDXL06.8307	DEERE (JDX)	GJDXL06.8307-001	27-MAR-2015
GJDXL06.8309	DEERE (JDX)	GJDXL06.8309-020	16-NOV-2015
GJDXL06.8312	DEERE (JDX)	GJDXL06.8312-017	16-NOV-2015
GJDXL09.0114	DEERE (JDX)	GJDXL09.0114-007	24-JUL-2015
GJDXL09.0202	DEERE (JDX)	GJDXL09.0202-016	30-SEP-2015
GJDXL09.0301	DEERE (JDX)	GJDXL09.0301-021	16-NOV-2015
GJDXL09.0308	DEERE (JDX)	GJDXL09.0308-025	30-NOV-2015
GJDXL09.0313	DEERE (JDX)	GJDXL09.0313-029	25-MAR-2016
GJDXL13.5103	DEERE (JDX)	GJDXL13.5103-008	24-JUL-2015
GJDXL13.5132	DEERE (JDX)	GJDXL13.5132-010	24-JUL-2015
GJDXL13.5146	DEERE (JDX)	GJDXL13.5146-009	24-JUL-2015
GJDXL13.5300	DEERE (JDX)	GJDXL13.5300-022	16-NOV-2015
GJDXL13.5310	DEERE (JDX)	GJDXL13.5310-023	16-NOV-2015
GJDXL13.5314	DEERE (JDX)	GJDXL13.5314-030	18-MAY-2016
GKHXL.34935D	KOHLER CO. (KHX)	GKHXL.34935D-009	08-DEC-2015
GKHXL.442155	KOHLER CO. (KHX)	GKHXL.442155-008	08-DEC-2015
GKHXL1.259LD	KOHLER CO. (KHX)	GKHXL1.259LD-011	24-DEC-2015
GKHXL1.37SF1	KOHLER CO. (KHX)	GKHXL1.37SF1-002	18-SEP-2015
GKHXL1.86DIM	KOHLER CO. (KHX)	GKHXL1.86DIM-005	18-SEP-2015
GKHXL2.48ESM	KOHLER CO. (KHX)	GKHXL2.48ESM-006	18-SEP-2015
GKHXL2.48EST	KOHLER CO. (KHX)	GKHXL2.48EST-003	18-SEP-2015
GKHXL2.48TCR	KOHLER CO. (KHX)	GKHXL2.48TCR-007	18-SEP-2015
GKHXL3.36EST	KOHLER CO. (KHX)	GKHXL3.36EST-004	18-SEP-2015
GKHXL3.36TCG	KOHLER CO. (KHX)	GKHXL3.36TCG-010	17-DEC-2015
GKHXL3.36TCR	KOHLER CO. (KHX)	GKHXL3.36TCR-001	18-SEP-2015
GMDDL14.0ZWK	MTU DD (MDD)	GMDDL14.0ZWK-005	14-DEC-2015
GMDDL21.0XWM	MTU DD (MDD)	GMDDL21.0XWM-008	04-FEB-2016
GMDDL21.0ZWR	MTU DD (MDD)	GMDDL21.0ZWR-001	03-NOV-2015
GMDDL31.8XRR	MTU DD (MDD)	GMDDL31.8XRR-002	03-NOV-2015

GMDDL35.8GRR	MTU DD (MDD)	GMDDL35.8GRR-003	03-NOV-2015
GMDDL40.1GNR	MTU DD (MDD)	GMDDL40.1GNR-004	14-DEC-2015
GMDDL57.2XTM	MTU DD (MDD)	GMDDL57.2XTM-006	14-DEC-2015
GMDDL95.4GTR	MTU DD (MDD)	GMDDL95.4GTR-007	04-FEB-2016
GMVXL01.0EBA	MITSUBISHI (MVX)	GMVXL01.0EBA-008	03-NOV-2015
GMVXL01.0EDB	MITSUBISHI (MVX)	GMVXL01.0EDB-004	26-MAY-2015
GMVXL01.3EBA	MITSUBISHI (MVX)	GMVXL01.3EBA-002	13-MAY-2015
GMVXL01.3EDB	MITSUBISHI (MVX)	GMVXL01.3EDB-001	13-MAY-2015
GMVXL01.3EEE	MITSUBISHI (MVX)	GMVXL01.3EEE-007	03-NOV-2015
GMVXL01.3FFF	MITSUBISHI (MVX)	GMVXL01.3FFF-006	03-NOV-2015
GMVXL02.2AAA	MITSUBISHI (MVX)	GMVXL02.2AAA-017	03-NOV-2015
GMVXL02.2EAA	MITSUBISHI (MVX)	GMVXL02.2EAA-019	08-DEC-2015
GMVXL02.5DAA	MITSUBISHI (MVX)	GMVXL02.5DAA-003	13-MAY-2015
GMVXL02.5LLL	MITSUBISHI (MVX)	GMVXL02.5LLL-016	03-NOV-2015
GMVXL03.3AAJ	MITSUBISHI (MVX)	GMVXL03.3AAJ-018	07-DEC-2015
GMVXL03.3AAK	MITSUBISHI (MVX)	GMVXL03.3AAK-015	03-NOV-2015
GMVXL03.3CBA	MITSUBISHI (MVX)	GMVXL03.3CBA-005	14-AUG-2015
GMVXL03.3EAA	MITSUBISHI (MVX)	GMVXL03.3EAA-014	03-NOV-2015
GMVXL24.5BBA	MITSUBISHI (MVX)	GMVXL24.5BBA-009	03-NOV-2015
GMVXL33.9BBA	MITSUBISHI (MVX)	GMVXL33.9BBA-010	03-NOV-2015
GMVXL37.1BBA	MITSUBISHI (MVX)	GMVXL37.1BBA-011	03-NOV-2015
GMVXL49.0BBA	MITSUBISHI (MVX)	GMVXL49.0BBA-013	03-NOV-2015
GMVXL65.4BBA	MITSUBISHI (MVX)	GMVXL65.4BBA-012	03-NOV-2015
GVSXL10.8T4F	VOLVO CE (VSX)	GVSXL10.8T4F-001-R01	26-FEB-2016
GVSXL12.8T4F	VOLVO CE (VSX)	GVSXL12.8T4F-002-R02	26-MAY-2016
GVSXL16.1T4F	VOLVO CE (VSX)	GVSXL16.1T4F-003-R01	11-MAY-2016

COMMERCE_INTRODUCTION_DATE	CARRYOVER_ENGINE_FAMILY_NAME	POWER_CATEGORY
20-DEC-2015	DDDXL14.0VLD	10 = 225<=kW<450
20-DEC-2015	DDDXL14.0WLD	14 = 560<kW<=2237
01-JAN-2016	FDICL01.8LEA	3 = 19<=kW<37
11-JUL-2016	FDICL02.4LEA	4 = 37<=kW<56
16-JUL-2016	FDICL02.4LEB	3 = 19<=kW<37
30-JUL-2016	FDICL03.4LEA	7 = 75<=kW<130
19-JUL-2016	FDICL03.4LEB	4 = 37<=kW<56
01-JAN-2016	FDICL05.8LEA	9 = 130<=kW<=560
21-DEC-2015		9 = 130<=kW<=560
01-JAN-2016	DJDXL02.9121	3 = 19<=kW<37
01-JAN-2016	FJDXL02.9142	4 = 37<=kW<56
01-JAN-2016	EJDXL02.9303	4 = 37<=kW<56
01-JAN-2016	CJDXL04.5119	7 = 75<=kW<130
01-JAN-2016	CJDXL04.5141	5 = 56<=kW<75
01-JAN-2016	CJDXL04.5211	7 = 75<=kW<130
01-JAN-2016	CJDXL04.5212	4 = 37<=kW<56
01-JAN-2016	DJDXL04.5214	4 = 37<=kW<56
01-JAN-2016	EJDXL04.5304	4 = 37<=kW<56
01-JAN-2016	FJDXL04.5305	7 = 75<=kW<130
01-APR-2016		9 = 130<=kW<=560
01-FEB-2016	FJDXL04.5305	7 = 75<=kW<130
01-JAN-2016	CJDXL06.8120	8 = 130<=kW<225
01-JAN-2016	CJDXL06.8204	9 = 130<=kW<=560
01-JAN-2016	CJDXL06.8210	7 = 75<=kW<130
01-JAN-2016	EJDXL06.8302	9 = 130<=kW<=560
01-JAN-2016		6 = 56<=kW<130
01-JAN-2016	FJDXL06.8309	9 = 130<=kW<=560
01-JAN-2016		9 = 130<=kW<=560
01-JAN-2016	CJDXL09.0114	10 = 225<=kW<450
01-JAN-2016	CJDXL09.0202	9 = 130<=kW<=560
01-JAN-2016	EJDXL09.0301	9 = 130<=kW<=560
01-JAN-2016		9 = 130<=kW<=560
01-MAR-2016		9 = 130<=kW<=560
01-JAN-2016	CJDXL13.5103	10 = 225<=kW<450
01-JAN-2016	CJDXL13.5132	14 = 560<kW<=2237
01-JAN-2016	EJDXL13.5146	12 = 450<=kW<=560
01-JAN-2016	EJDXL13.5300	9 = 130<=kW<=560
01-JAN-2016	FJDXL13.5310	9 = 130<=kW<=560
01-APR-2014		9 = 130<=kW<=560
21-DEC-2015	FKHXL.34935D	1 = kW<8
21-DEC-2015	FKHXL.442155	1 = kW<8
29-DEC-2015	FKHXL1.259LD	2 = 8<=kW<19
01-OCT-2015	FKHXL1.37SF1	2 = 8<=kW<19
01-OCT-2015	FKHXL1.86DIM	2 = 8<=kW<19
01-OCT-2015	FKHXL2.48ESM	3 = 19<=kW<37
01-OCT-2015	FKHXL2.48EST	3 = 19<=kW<37
01-OCT-2015	DKHXL2.48TCR	4 = 37<=kW<56
01-OCT-2015	FKHXL3.36EST	5 = 56<=kW<75
21-DEC-2015		5 = 56<=kW<75
01-OCT-2015	FKHXL3.36TCR	4 = 37<=kW<56
12-OCT-2016	AMDDL14.0GWK	12 = 450<=kW<=560
01-JAN-2016	FMDDL21.0XWM	13 = 560<kW<=900
12-OCT-2016	AMDDL21.0GWR	15 = kW>560
01-JAN-2016	7MDDL35.8GRR	14 = 560<kW<=2237

01-JAN-2016	7MDDL35.8GRR	14 = 560<kW<=2237
22-JAN-2016	FMDDL40.1GNR	14 = 560<kW<=2237
01-JAN-2016	FMDDL95.4XTM	16 = kW>900
01-JAN-2016	9MDDL95.4XTR	14 = 560<kW<=2237
01-JAN-2016	EMVXL01.0EBA	2 = 8<=kW<19
18-MAY-2015		2 = 8<=kW<19
24-FEB-2015		2 = 8<=kW<19
24-FEB-2015		2 = 8<=kW<19
01-JAN-2016	EMVXL01.3EEE	2 = 8<=kW<19
01-JAN-2016	EMVXL01.3FFF	2 = 8<=kW<19
01-JAN-2016	DMVXL02.2AAA	4 = 37<=kW<56
01-JAN-2016	DMVXL02.2AAA	4 = 37<=kW<56
27-APR-2015	8MVXL02.5GGG	3 = 19<=kW<37
01-JAN-2016	7MVXL02.5EEE	3 = 19<=kW<37
01-JAN-2016	7MVXL03.3AAC	4 = 37<=kW<56
01-JAN-2016	7MVXL03.3AAF	3 = 19<=kW<37
30-JUN-2015		5 = 56<=kW<75
01-JAN-2016		3 = 19<=kW<37
01-JAN-2016	9MVXL24.5BBA	14 = 560<kW<=2237
01-JAN-2016	8MVXL33.9BBA	14 = 560<kW<=2237
01-JAN-2016	7MVXL37.1BBA	14 = 560<kW<=2237
01-JAN-2016	7MVXL49.0BBA	14 = 560<kW<=2237
01-JAN-2016	9MVXL65.4BBA	14 = 560<kW<=2237
31-OCT-2016		9 = 130<=kW<=560
31-OCT-2016		9 = 130<=kW<=560
31-OCT-2016		9 = 130<=kW<=560

APPLICABLE_REGULATION	APPLICABLE_TIER
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
2 = Part 1039	4 = Tier 4 (Final or Phase In)
2 = Part 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2

4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
5 = Part 60 and 1039	4 = Tier 4 (Final or Phase In)
2 = Part 1039	4 = Tier 4 (Final or Phase In)
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3 = Part 60 only certified to requirements of 1039	I = Interim Tier 4
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4 = Part 60 only certified to the requirements of part 89	3 = Tier 3
2 = Part 1039	4 = Tier 4 (Final or Phase In)
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
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4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2
2 = Part 1039	4 = Tier 4 (Final or Phase In)
2 = Part 1039	4 = Tier 4 (Final or Phase In)
2 = Part 1039	4 = Tier 4 (Final or Phase In)

APPLICABLE_COMPLIANCE_STANDARD

N = Not Applicable
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FUEL

L = 300-500 ppm Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
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U = 7-15 ppm Ultra Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
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U = 7-15 ppm Ultra Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
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L = 300-500 ppm Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
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L = 300-500 ppm Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
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U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel, L = 300-500 ppm Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
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L = 300-500 ppm Low Sulfur Diesel
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L = 300-500 ppm Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
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U = 7-15 ppm Ultra Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
L = 300-500 ppm Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel
U = 7-15 ppm Ultra Low Sulfur Diesel

FUEL_METER_SYSTEM	USEFUL_LIFE_OF_ENGINE_FAMILY
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	B = 7 years / 5,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	B = 7 years / 5,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	B = 7 years / 5,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
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D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	A = 5 years / 3,000 hrs
D = Direct Diesel Injection	A = 5 years / 3,000 hrs
D = Direct Diesel Injection, D = Direct Diesel Injection	A = 5 years / 3,000 hrs
I = Indirect Diesel Injection	A = 5 years / 3,000 hrs
D = Direct Diesel Injection	A = 5 years / 3,000 hrs
D = Direct Diesel Injection	D = Alternate Useful Life
D = Direct Diesel Injection	B = 7 years / 5,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs

D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
I = Indirect Diesel Injection	A = 5 years / 3,000 hrs
I = Indirect Diesel Injection	A = 5 years / 3,000 hrs
I = Indirect Diesel Injection	A = 5 years / 3,000 hrs
I = Indirect Diesel Injection	A = 5 years / 3,000 hrs
I = Indirect Diesel Injection	A = 5 years / 3,000 hrs
I = Indirect Diesel Injection	A = 5 years / 3,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
I = Indirect Diesel Injection	B = 7 years / 5,000 hrs
I = Indirect Diesel Injection	B = 7 years / 5,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
I = Indirect Diesel Injection	B = 7 years / 5,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	B = 7 years / 5,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs
D = Direct Diesel Injection	C = 10 years / 8,000 hrs

ENGINE_COMBUSTION_CYCLE	NON_ATD_TYPE	ATD_TYP	Steady State NMI	Steady	Steady S	Steady St
A = 4 Stroke Compression Ignition	T = Internal EGR, Y = Electror		0.11	3.64	3.8	1.1
A = 4 Stroke Compression Ignition	Y = Electronic Control		0.07	6.08	6.1	0.7
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0	3.6	3.6	0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0	3.85	3.9	0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.03	3.41	3.4	0.2
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	S = Selec	-0.08	-0.64		-0.1
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.01	3.33	3.3	0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	A = Amm	0.02	0.23		0.4
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	A = Amm	0.04	0.21		0
A = 4 Stroke Compression Ignition	O = Other, S = Smoke Puff Lir		0.69	6.31	7	1.9
A = 4 Stroke Compression Ignition	O = Other, S = Smoke Puff Lir		0.42	4.02	4.4	1.3
A = 4 Stroke Compression Ignition	O = Other, X = Engi	P = PTO>	0.01	4.24	4.2	0
A = 4 Stroke Compression Ignition	O = Other, S = Smoke Puff Lir		0.18	3.47	3.7	1.1
A = 4 Stroke Compression Ignition	O = Other, S = Smoke Puff Lir		0.25	4.11	4.4	0.6
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0	2.3		0
A = 4 Stroke Compression Ignition	O = Other, S = Smoke Puff Lir		0.3	3.92	4.2	2
A = 4 Stroke Compression Ignition	O = Other, X = Engine Design		0.39	4.21	4.6	1.2
A = 4 Stroke Compression Ignition	O = Other, X = Engi	P = PTO>	0.01	4.32	4.3	0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.02	0.15		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	S = Selec	0	0.11		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	A = Amm	0.02	0.15		0
A = 4 Stroke Compression Ignition	O = Other, S = Smoke Puff Lir		0.12	3.79	3.9	1.2
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0	1.6		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0	2.8		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.01	0.11		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.01	0.07		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	S = Selec	0.02	0.05		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.02	0.06		0
A = 4 Stroke Compression Ignition	O = Other, S = Smoke Puff Lir		0.09	3.8	3.9	0.9
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.01	1.6		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	S = Selec	0	0.09		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	S = Selec	0	0.08		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	S = Selec	0	0.09		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - Electronic/E		0.11	3.31	3.4	0.6
A = 4 Stroke Compression Ignition	O = Other, S = Smoke Puff Lir		0.12	5.59	5.7	0.5
A = 4 Stroke Compression Ignition	O = Other, S = Smoke Puff Lir		0.18	3.56	3.7	1.5
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	S = Selec	0.02	0.04		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	A = Amm	0.03	0.11		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.06	0.04		0
A = 4 Stroke Compression Ignition	X = Engine Design Modificatio		1.47	5.55	7	6.7
A = 4 Stroke Compression Ignition	O = Other, V = EGR - Vacuum		1.34	5.47	6.8	4.3
A = 4 Stroke Compression Ignition	O = Other, X = Engine Design		1.12	5.81	6.9	3.8
A = 4 Stroke Compression Ignition	O = Other		0.25	4.11	4.4	2.7
A = 4 Stroke Compression Ignition	O = Other, X = Engine Design		0.81	5.45	6.3	3.9
A = 4 Stroke Compression Ignition	X = Engine Design Modificatio		0.42	5.99	6.4	2.1
A = 4 Stroke Compression Ignition	X = Engine Design Modificatio		0.18	6.02	6.2	0.9
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.02	4.05	4.1	0
A = 4 Stroke Compression Ignition	X = Engine Design Modificatio		0.11	3.55	3.7	0.9
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.04	2.94	3	0.6
A = 4 Stroke Compression Ignition	C = Cooled EGR - E	D = Diese	0.05	3.29	3.3	1
A = 4 Stroke Compression Ignition	Y = Electronic Control		0.33	3.36	3.7	1.4
A = 4 Stroke Compression Ignition	C = Cooled EGR - Electronic/E		0.09	3.1		0.2
A = 4 Stroke Compression Ignition	Y = Electronic Control		0.29	5.88	6.2	1.2
A = 4 Stroke Compression Ignition	Y = Electronic Control		0.17	5.33	5.5	1.6

A = 4 Stroke Compression Ignition	Y = Electronic Control	0.17	5.33	5.5	1.6
A = 4 Stroke Compression Ignition		0.19	5.68	5.9	1.1
A = 4 Stroke Compression Ignition	C = Cooled EGR - Electronic/E	0.07	3		0.2
A = 4 Stroke Compression Ignition	S = Smoke Puff Limiter, Y = E	0.25	5.37	5.6	2
A = 4 Stroke Compression Ignition		0.75	5.94	6.7	2.2
A = 4 Stroke Compression Ignition		0.4	5.37	5.8	2.5
A = 4 Stroke Compression Ignition		0.34	5.76	6.1	1.9
A = 4 Stroke Compression Ignition		0.42	5.66	6.1	2.2
A = 4 Stroke Compression Ignition		0.3	5.43	5.7	2.6
A = 4 Stroke Compression Ignition		0.34	5.55	5.9	2.5
A = 4 Stroke Compression Ignition	Y = Electronic Contr P = PTO›	0.29	3.72	4	0.5
A = 4 Stroke Compression Ignition	Y = Electronic Contr P = PTO›	0.29	3.72	4	0.5
A = 4 Stroke Compression Ignition		0.26	5.44	5.7	1.1
A = 4 Stroke Compression Ignition		0.25	5.49	5.7	1.2
A = 4 Stroke Compression Ignition		0.24	3.92	4.2	1.2
A = 4 Stroke Compression Ignition		0.1	6.63	6.7	0.5
A = 4 Stroke Compression Ignition		0.13	3.88	4	0.6
A = 4 Stroke Compression Ignition	C = Cooled EGR - E D = Diese	0.32	3.16	3.5	1.3
A = 4 Stroke Compression Ignition	X = Engine Design Modificatio	0.63	5.24	5.9	0.7
A = 4 Stroke Compression Ignition	X = Engine Design Modificatio	0.23	5.51	5.7	0.6
A = 4 Stroke Compression Ignition	X = Engine Design Modificatio	0.42	5.36	5.8	0.7
A = 4 Stroke Compression Ignition	X = Engine Design Modificatio	0.58	4.99	5.6	0.6
A = 4 Stroke Compression Ignition	X = Engine Design Modificatio	0.51	5.41	5.9	0.6
A = 4 Stroke Compression Ignition	V = EGR - Vacuum, S = Selec	0.02	0.21		0.2
A = 4 Stroke Compression Ignition	C = Cooled EGR - E P = PTO›	0.1	0.24		0
A = 4 Stroke Compression Ignition	C = Cooled EGR - E P = PTO›	0.05	0.13		0

Steady St	Steady S	Steady State N2	Steady State (	Transient NMHC	Transient N(	Transient NMH
0.18	738.92					
0.08	687.06					
0.02	870.5			0.01	3.76	3.8
0.02	770.1			0.02	3.79	3.8
0.02	809.8			0.05	3.57	3.6
0	738.3			-0.82	-1.56	
0.01	789.7			0.03	3.48	3.5
0.01	685.02			0.02	0.28	
0.01	666.6			0.02	0.22	
0.22	740.07					
0.28	868.36					
0.01	903.4	0.01	0.01	0.01	4.18	4.2
0.14	760.48					
0.23	755.65					
0	768		0	0.01	2.6	
0.25	803.38					
0.27	872.37					
0	932.8	0.01	0	0.01	4.41	4.4
0.01	749.2	0.07	0	0.03	0.25	
0.02	724.5	0.19	0			
0.01	749.2	0.07	0	0.03	0.25	
0.12	714.64					
0	728		0	0	1.6	
0.01	719		0	0	3.1	
0	672.3	0.05	0	0.01	0.16	
0.01	685	0.15	0			
0	708.6	0.04	0	0	0.06	
0.02	692.4	0.03	0			
0.14	712.79					
0	671		0	0.01	1.7	
0	664.9	0.05	0	0	0.14	
0	671.3		0	0	0.08	
0.02	649.9	0.1	0			
0.1	731.4					
0.07	687.91					
0.13	733.88					
0	690.1	0.05	0	0.03	0.06	
0	677.7	0.05	0	0.01	0.07	
0.02	677	0.1	0			
0.51	1040.7			0.39	0.01	0.4
0.46	850.72		0.03	0.39	0.01	0.4
0.35	933.3			0.46	0.01	0.5
0.28	905.72	0.01	0	0.46	5.3	5.8
0.19	830.93		0.02			
0.18	762.75		0.01			
0.26	893.88		0			
0.02	763.78		0	0.03	3.77	3.8
0.31	881.7		0			
0.03	738.82		0			
0.02	760.88		0	0.18	3.57	3.8
0.17	756.96					
0.02	651.28		0			
0.18	665.91					
0.16	695.85					

0.16	695.85					
0.12	682.9					
0.02	652.17		0			
0.16	0.69					
0.27	1048.3		0.02			
0.21	1001		0	0.56	5.85	6.4
0.13	855.23		0.01			
0.18	963.7		0.01	0.49	6.37	6.9
0.25	1055			0.41	6.29	6.7
0.17	969.72		0.24			
0.01	902		0	-0.02	3.68	3.7
0.01	902		0	-0.02	3.68	3.7
0.2	815.78					
0.27	803.09		0.01			
0.24	678.49		0			
0.26	754.11		0			
0.17	736.99		0			
0.02	851.53		0.02	0.56	3.59	4.2
0.14	737.53					
0.16	716.64					
0.1	714.75					
0.15	733.2					
0.17	713.95					
0.01	732.9	0.04		0.01	0.22	
0	692.2	0.15	0	0.05	0.19	
0	654		0	0.04	0.14	

Transient CO	Transient PM	Transient CO2	Transient N2O	Transient CH4	SMOKE_ACCEL	SMOKE_LUG
					0	0
0.2	0.02	938.77				
0.1	0.02	808.47				
0.6	0.02	882.45				
-8	-0.01	787.66				
0.3	0.02	885.13				
0.9	0.01					
0	0.02	679.41				
0.1	0.01	1015	0.01	0.01		
0.1	0	838.4		0		
					2	2
					2	1
0.1	0	1095.55	0.01	0		
0.1	0.03	805.34	0.08	0		
0.1	0.03	805.34	0.08	0		
0	0	791.95		0		
0.1	0	780.3		0.01		
0	0	709.61	0.08	0		
0.1	0	748.31	0.06	0		
0	0.01	712.25		0		
0	0	699.22	0.11	0		
0.1	0	699.23		0		
					11	1
0	0	726.93	0.07	0		
0	0	714.57	0.06	0		
0.8	0.11	0.01				
0.8	0.11	0.01		0.01		
1	0.01	0.1			3	3
4.9	0.27	1064.66	0	0	2	3
0	0.02	776.37		0		
1.4	0.01	818.72		0.01		
					0	0
					0	0
					0	0

					0	0
3.4	0.25	1034.2		0.01	2	2
2.4	0.16	937.15		0.01	8	7
3.1	0.24	1090.1			8	6
0	-0.07	997.86		0		
0	-0.07	997.86		0		
					5	4
					7	5
					6	5
3.6	0.02	873.36		0.04		
0.2	0.02	780.89	0.07			
0	0	721.04	0.31	0		
0	0	685.91		0		

SMOKE_PI	FEL_NMHC	FEL_NOX	FEL_NMH	FEL_CO	FEL_PM
0					
3					
4					
					0.01
					0.04
					0.04
					0.01
					0.01
					0.01
		0.3			0.01
19					
					0.01
4					
3					
0					
0					
0					

0

3

12
10

7
10

8

0.03
0.01

ENGINE_MODEL	ENGINE_CODE
Series 60 14L	5531
Series 60	5572
D18NAP	DL01-LEL00
D24NAP	DL02-LEL05
D24NAP	DL02-LER00
D34P	DL03-LEL00
D34NAP	DL03-LEL04
DL06P	DL06-LEE02
DL08P	DL08-LEE01
3029T	3029TFG80A
3029	3029HFG89A
3029	3029HPRNT1
4045H	4045HFG82A
4045H	4045HFG81
4045	4045HPRNT8
4045H	4045HPRNT9
4045T	4045TF290I
4045	4045TPRNT3
4045	4045HPRNT11
4045	4045HPRNT13
4045	4045HPRNT11
6068H	6068HFG82A
6068	6068HPRNT4
4045	4045HPRNT7
6068	6068HPRNT5
4045	4045HPRNT12
6068	6068HPRNT6
6068	6068HPRNT7
6090H	6090HFG84A
6090	6090HPRNT1
6090	6090HPRNT4
6090	6090HPRNT6
6090	6090HPRNT7
6135H	6135HF485A
6135H	6135HFG75A
6135H	6135HFG84A
6135	6135HPRNT2
6135	6135HPRNT3
6135	6135HPRNT4
15LD350/D (3450	N/A
9LD625/2	N/A
KDW1404(2700)	N/A
KDI1903M	N/A
KD2504ESM	N/A
KDI 2504TM/G18	N/A
KDI 1903TCR/22	N/A
KDI 3404TM/G18	N/A
KDI 3404TCR/G1	N/A
KDI 3404TCR/22(	N/A
6R1600G80S	7215
12V1600C70	7270
6R1600G80S	7185
8V2000	5567

8V2000	5567
16V2000G86S	7289
12V4000C65	7266
20V4000G83L	7292
L3E	L3E-P8-1
L3E	L3E-P13-2
S3L2	S3L2-P14-1
S3L2	S3L2-P18-2
S3L2	S3L2-G2500
S3L2	S3L2-G1800
D03CJ-TAA	3CJ-TAY431IA
D03CJ-TAA	3CJ-TAY431IA-3
S4Q2	S4Q2-Y3EPA2
S4Q2	S4Q2-Y3EPA1
S4S-DTB	S4S-Y3DT61SD
SS	S4S-Y365ADDG
D04EG-MECH-TA	D04EG-MECH-P60-1
D04EG-NA	D04EG-P36-1
S6R-PTAW	S6R-Y2PTAW-1
S12A2-PTAW	S12A2-Y2PTAW-2
S12H-PTAW	S12H-Y2PTAW-1
S12R-PTAW	S12R-Y2PTAW-1
S16R-PTAW2	S16R-Y2PTAW2-1
D11L	11-17
D13J	13-42
D16J	16-33

DISPLACEMENT	CERTIFICATION_FUEL
14.004	L = 300-500 ppm Low Sulfur Diesel
14.004	L = 300-500 ppm Low Sulfur Diesel
1.794	U = 7-15 ppm Ultra Low Sulfur Diesel
2.392	U = 7-15 ppm Ultra Low Sulfur Diesel
2.392	U = 7-15 ppm Ultra Low Sulfur Diesel
3.409	U = 7-15 ppm Ultra Low Sulfur Diesel
3.409	U = 7-15 ppm Ultra Low Sulfur Diesel
5.89	U = 7-15 ppm Ultra Low Sulfur Diesel
7.64	U = 7-15 ppm Ultra Low Sulfur Diesel
2.94	L = 300-500 ppm Low Sulfur Diesel
2.94	L = 300-500 ppm Low Sulfur Diesel
2.94	U = 7-15 ppm Ultra Low Sulfur Diesel
4.525	L = 300-500 ppm Low Sulfur Diesel
4.525	L = 300-500 ppm Low Sulfur Diesel
4.525	U = 7-15 ppm Ultra Low Sulfur Diesel
4.525	L = 300-500 ppm Low Sulfur Diesel
4.525	L = 300-500 ppm Low Sulfur Diesel
4.525	U = 7-15 ppm Ultra Low Sulfur Diesel
4.525	U = 7-15 ppm Ultra Low Sulfur Diesel
4.525	U = 7-15 ppm Ultra Low Sulfur Diesel
4.525	U = 7-15 ppm Ultra Low Sulfur Diesel
6.8	L = 300-500 ppm Low Sulfur Diesel
6.788	U = 7-15 ppm Ultra Low Sulfur Diesel
4.525	U = 7-15 ppm Ultra Low Sulfur Diesel
6.788	U = 7-15 ppm Ultra Low Sulfur Diesel
4.525	U = 7-15 ppm Ultra Low Sulfur Diesel
6.788	U = 7-15 ppm Ultra Low Sulfur Diesel
6.788	U = 7-15 ppm Ultra Low Sulfur Diesel
9	L = 300-500 ppm Low Sulfur Diesel
9	U = 7-15 ppm Ultra Low Sulfur Diesel
8.924	U = 7-15 ppm Ultra Low Sulfur Diesel
8.984	U = 7-15 ppm Ultra Low Sulfur Diesel
8.984	U = 7-15 ppm Ultra Low Sulfur Diesel
13.5	L = 300-500 ppm Low Sulfur Diesel
13.5	L = 300-500 ppm Low Sulfur Diesel
13.548	L = 300-500 ppm Low Sulfur Diesel
13.548	U = 7-15 ppm Ultra Low Sulfur Diesel
13.548	U = 7-15 ppm Ultra Low Sulfur Diesel
13.548	U = 7-15 ppm Ultra Low Sulfur Diesel
0.349	U = 7-15 ppm Ultra Low Sulfur Diesel
1.248	U = 7-15 ppm Ultra Low Sulfur Diesel
1.371	U = 7-15 ppm Ultra Low Sulfur Diesel
1.861	U = 7-15 ppm Ultra Low Sulfur Diesel
2.482	U = 7-15 ppm Ultra Low Sulfur Diesel
2.482	U = 7-15 ppm Ultra Low Sulfur Diesel
1.861	U = 7-15 ppm Ultra Low Sulfur Diesel
3.359	U = 7-15 ppm Ultra Low Sulfur Diesel
3.359	U = 7-15 ppm Ultra Low Sulfur Diesel
3.359	U = 7-15 ppm Ultra Low Sulfur Diesel
10.5	U = 7-15 ppm Ultra Low Sulfur Diesel
21.042	U = 7-15 ppm Ultra Low Sulfur Diesel
10.5	L = 300-500 ppm Low Sulfur Diesel
23.9	L = 300-500 ppm Low Sulfur Diesel

23.9	L = 300-500 ppm Low Sulfur Diesel
35.727	L = 300-500 ppm Low Sulfur Diesel
57.199	U = 7-15 ppm Ultra Low Sulfur Diesel
95.4	L = 300-500 ppm Low Sulfur Diesel
0.953	U = 7-15 ppm Ultra Low Sulfur Diesel
0.953	U = 7-15 ppm Ultra Low Sulfur Diesel
1.319	U = 7-15 ppm Ultra Low Sulfur Diesel
1.319	U = 7-15 ppm Ultra Low Sulfur Diesel
1.319	U = 7-15 ppm Ultra Low Sulfur Diesel
1.319	U = 7-15 ppm Ultra Low Sulfur Diesel
1.656	U = 7-15 ppm Ultra Low Sulfur Diesel
1.656	U = 7-15 ppm Ultra Low Sulfur Diesel
2.5	U = 7-15 ppm Ultra Low Sulfur Diesel
2.5	U = 7-15 ppm Ultra Low Sulfur Diesel
3.3	U = 7-15 ppm Ultra Low Sulfur Diesel
3.3	U = 7-15 ppm Ultra Low Sulfur Diesel
3.331	U = 7-15 ppm Ultra Low Sulfur Diesel
3.331	U = 7-15 ppm Ultra Low Sulfur Diesel
24.514	L = 300-500 ppm Low Sulfur Diesel
33.93	L = 300-500 ppm Low Sulfur Diesel
37.11	L = 300-500 ppm Low Sulfur Diesel
49.028	L = 300-500 ppm Low Sulfur Diesel
65.37	L = 300-500 ppm Low Sulfur Diesel
10.837	U = 7-15 ppm Ultra Low Sulfur Diesel
12.777	U = 7-15 ppm Ultra Low Sulfur Diesel
16.123	U = 7-15 ppm Ultra Low Sulfur Diesel

ENGINE_OPERATION	TEST_PRO	TEST_TYPE
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady	RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady	RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady	RMT = Ramped-Modal Testing
V = Variable Speed	3 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	3 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady	DMT = Discrete-Modal Testing

C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
V = Variable Speed	3 = Steady· RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
V = Variable Speed	3 = Steady· DMT = Discrete-Modal Testing
V = Variable Speed	3 = Steady· RMT = Ramped-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady· RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady· RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady· DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
C = Constant Speed	2 = Steady· DMT = Discrete-Modal Testing
V = Variable Speed	1 = Steady· RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady· RMT = Ramped-Modal Testing
V = Variable Speed	1 = Steady· RMT = Ramped-Modal Testing